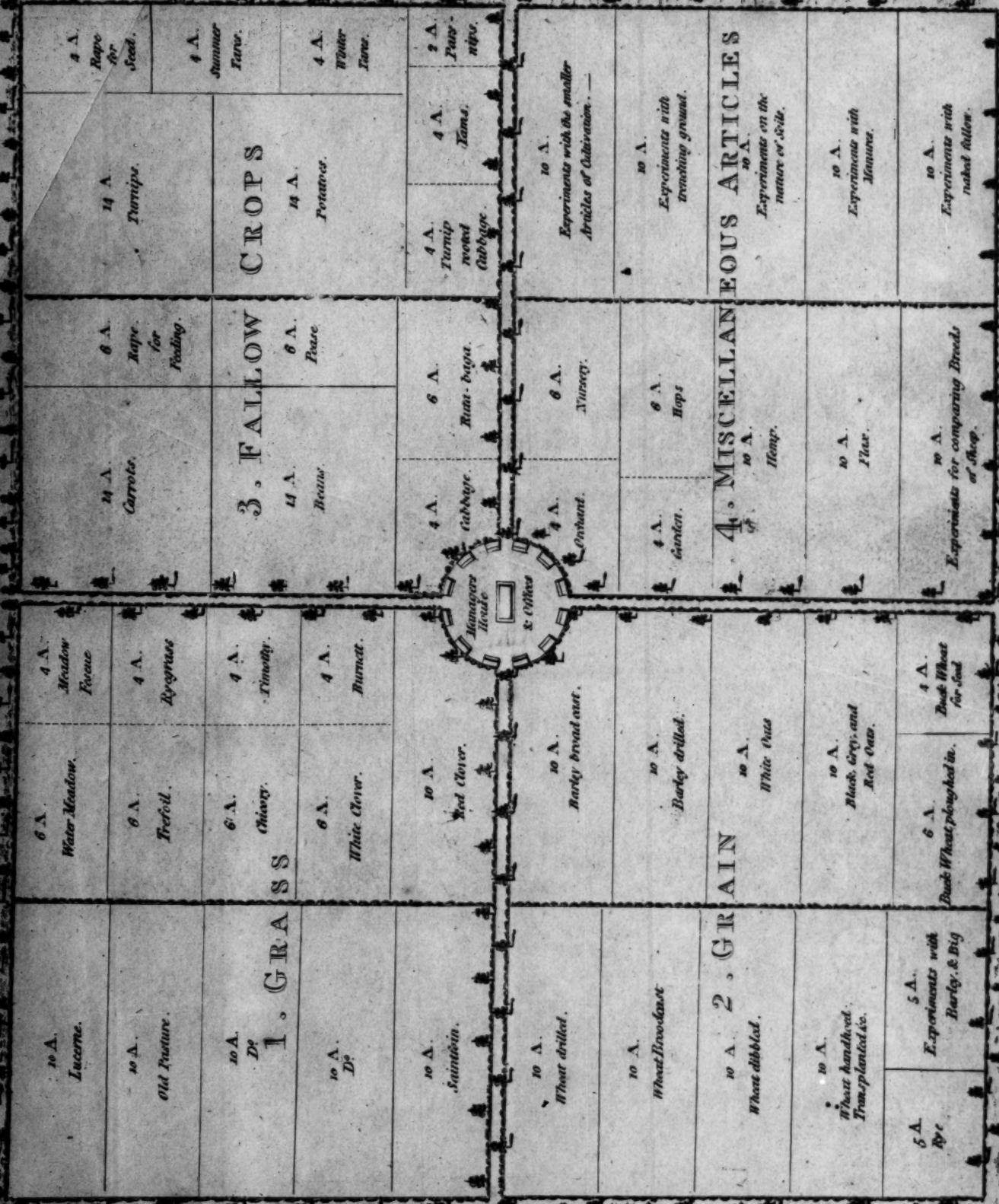


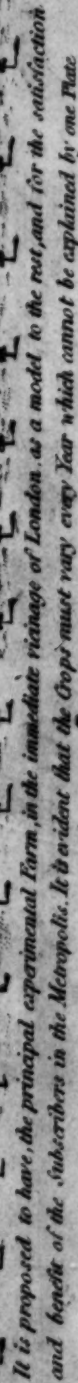
# One Year's Crops on an EXPERIMENTAL FARM consisting of 400 Acres.

divided into 4 DEPARTMENTS of 100. Acres each.



It is proposed to have the principal experimental Farm, in the immediate vicinity of London, as a model to the rest, and for the satisfaction and benefit of the subscribers in the Metropolis. It is evident that the Crops must vary every Year which cannot be explained by one Plate

*divided into 4 DEPARTMENTS of 100. Items each.*





**PROPOSALS**  
**FOR ESTABLISHING BY SUBSCRIPTION,**  
**A NEW INSTITUTION,**  
**TO BE CALLED**  
**THE PLOUGH,**  
**OR**  
**JOINT STOCK FARMING SOCIETY,**  
**FOR THE PURPOSE OF**  
**ASCERTAINING THE PRINCIPLES OF AGRICULTURAL**  
**IMPROVEMENT;**  
**SUBMITTED TO THE CONSIDERATION OF THE FRIENDS TO AGRICULTURAL**  
**AND OTHER PUBLIC IMPROVEMENTS.**

**BY SIR JOHN SINCLAIR, BART. M. P.**

SIR JOHN SINCLAIR presents his compliments to  
Requests the favour of his attention to the subjoined Proposals for establishing a **JOINT STOCK FARMING SOCIETY**, which, it is hoped, will have the good fortune of meeting with his approbation. The frequent scarcities of grain which have lately occurred, the heavy additional expences they have necessarily occasioned to all ranks of society, and the peculiar distress which the lower orders have thence experienced, render it indispensably necessary, to bring forward such measures, as have a tendency to promote the cultivation and improvement of the country. Sir John Sinclair has thence been induced, to submit the following Proposals to the consideration of the Public.

The favour of an early Answer is particularly requested, with any observations which may occur on the Proposals herewith transmitted.

*London, 29, Parliament-street,  
26th Jan. 1800.*

## PROPOSALS, &c.

*The following Particulars will explain the Nature of the proposed Institution.*

### I. THE PROPOSED CAPITAL.

1,600 shares at £.50 each £. 80,000

It is also intended, to admit half shares at £.25 each; but the persons holding them, though they will have a right to partake in the pecuniary advantages of the proposed Institution, are not to be entitled to vote in the choice of the Directors. The number of shares, which each person may hold, not to be restricted. The Directors to be annually chosen in London, and to meet there. The books of the Society to be always open to the inspection of the subscribers.

### II. PROPOSED EXPENDITURE.

- |  |           |
|--|-----------|
| 1. To the expence of establishing of eight experimental arable, and grazing farms, in the neighbourhood of London, and in different parts of the kingdom, at £.4,000 each, on an average | £. 32,000 |
| 2. To ditto for two upland farms, for improving mountain sheep, at £.1,500 each  | 3,000     |
| 3. To the expence of purchasing 5,000 acres of land, inclosing and planting them, with larch, fir, and other trees, and various expences attending the same                              | 35,000    |
| 4. To a Contingent Fund, reserved for incidental and unforeseen expences   | 10,000    |
|  | £. 80,000 |

### III. ULTIMATE RETURN.

- |   |                   |
|---|-------------------|
| 1. Sale of stock, crop, and implements, on the experimental farms, at the conclusion of 21 or of 30 years, or any other period that may be fixed on by the Society* | £. 35,000         |
| 2. Value of 5,000 acres of land, the buildings erected thereon, and of 1,250,000 larches, fir, and other trees, at the conclusion of 30 years                       | 218,000           |
| 3. Principal of the Contingent Fund, on the supposition that the interest will defray all expences of management, &c.   | 10,000            |
| <b>Total</b>  | <b>£. 263,000</b> |

Which is above thrice the original capital. According to the calculations of some experienced nurserymen, the return will be still greater, and will exceed the produce of the capital laid out at compound interest, at 5 per cent. Without pretending to ascertain, what must depend upon the value of timber, and a variety of other circumstances at the moment, it may be sufficient to remark, that the proposed institution, must not only be productive of infinite public benefit, but must ultimately be a concern sufficiently profitable, to intitle it to the cordial support of those who are friends to public improvement.

In addition to the ultimate return, the Subscribers will, in the interim, enjoy the following advantages, namely,

1. The advantage of having an account of the Proceedings of the Society annually transmitted to them;

\* The experimental farms might be given up at the end of 21 years, and that part of the property divided. The plantations, probably, had better be retained for nine or ten years longer.



2. The privilege of visiting the experimental farms, either in their own neighbourhood, or wherever they are established by the Society ;
3. The right of nominating persons, to be instructed at the different agricultural academies proposed to be erected, at each experimental farm ; and,
4. A division of the annual profit that may arise from the experimental farms.

It is also intended, to keep up such a connection with the Board of Agriculture, and the various societies formed for agricultural purposes in the kingdom, as cannot fail to be attended with the most important advantages, both to the Society itself, and to the farming interest in general.

### CONDITIONS OF THE SUBSCRIPTION.

1. That no subscriber shall be compellable to pay his subscription, or shall incur any expense whatever, unless the Society is actually constituted.
2. That the capital of £.80,000 shall not be increased, without the consent of a majority of the subscribers, and for the manifest interest of the subscribers, and of the public.
3. That the society shall be established by charter, or by act of parliament, or by deed inrolled, so as to prevent the possibility of any demand beyond the sum subscribed.
4. That the shares shall be transferable from the time that the society is established, and that the sums subscribed, shall be payable by such instalments, as may be determined on at a general special meeting of the subscribers, and issued solely under the authority of directors, or trustees, appointed by the Society for that special purpose.

For farther particulars apply to Sir John Sinclair, Bart. M. P. 29, Parliament-street, London, or to Messrs. G. and W. Nicol, Booksellers to his Majesty, Pall-Mall. And subscriptions will be received, at the following places, namely; at William Devaynes, Esq. Treasurer to the Society, 39, Pall-Mall; at Messrs. Coutts and Co. 59, Strand; Glynn, Mills, Halifax, and Co. 12, Birchin-lane; Edwards, Templar, and Co. 18, Stratford Place; Smith, Payne, and Smith, George-street, Mansion House; Hoares, Fleet-street; Pybus, Call, Grant, and Co. Bond-street; Herries, Farquhar, and Co. St. James's-street; Sikes, Snaith, and Co. Mansion-House-street; Thornton, Down, and Co. Bartholomew-lane; Stephenson, Batson, and Co. Lombard-street; Birch, Chambers, and Hobbes, Bond-street; Ransom, Morland, and Co. Pall-Mall; Martins and Co. Lombard-street; Bowles, Browne, and Co. Lombard-street; Barclays, Tritton, and Co. Lombard-street; Dorrien and Co. Finch-lane; Sansom and Co. Lombard-street; Fuller and Chatteris, Lombard-street; Walpole and Co. Lombard-street; Weston, Pinhorn, and Co. Borough Bank; Hammersley and Co. Pall-Mall; Forster, Lubbock, and Co. Mansion-House-street; Newnham, Everet, and Co. Mansion-House-street; Stephenson and Sael, Lombard-street; Harrison and Co. Mansion-House-street; Handsoll and Stirling, Strand; also at Lloyd's, Garraway's, and the Stock Exchange.

No.	Name.	Place of Abode.	No. of Shares.	Amount in Money.

## HINTS ON THE ADVANTAGES

OF

## EXPERIMENTAL FARMS.

It is much to be doubted, whether the art of agriculture can ever be brought to any high degree of perfection, unless by means of experiments, accurately tried, and persevered in for some time. We have hitherto, in general, relied too much on vague opinions, and assertions which have not been warranted by sufficient authority; whereas nothing but accurate and repeated experiments, can thoroughly improve the agricultural art, and ascertain the principles on which it ought to be conducted. For these and other reasons, unnecessary here to dwell on, Mr. Arthur Young, Mr. Marshall, in a recent, and in former, publications, Dr. Francis Home, and other distinguished agriculturists, have repeatedly urged the advantage of having farms established for that special purpose. The importance of such farms to the different districts in which they were respectively placed, has been put beyond all question by the authors above alluded to; and I trust it will appear, in the course of the following observations, that no measure can be suggested, more likely to be attended with advantageous consequences to the inhabitants of the metropolis, or of any considerable and flourishing town, than that of having an experimental farm, on a great scale, in its immediate neighbourhood.

I. From the increasing population of London, and of the other large towns in the kingdom, it is impossible they can be supplied with provisions at a reasonable rate, unless the agriculture of the country is brought to a high degree of perfection, which can only be done through the medium of experimental farms, the only sure means of ascertaining the principles of improvement. At present, the nation is under the necessity of depending on foreign industry and cultivation for a part of its subsistence; and we are periodically visited with a scarcity of food, which increases the expence of living to every family in the kingdom, and loads the rich with heavy additional burthens to maintain the poor, and to preserve them from the miseries of famine. A small portion of that sum, the exaction of which thus becomes so frequently necessary, were it properly applied to the improvement of agriculture, would soon enable this country to feed itself, and, indeed, would put it in the power of the farmer, to supply the public with provisions at a reasonable rate. Hence it is evident, that every man who pays 15*d.* instead of 9*d.* for a loaf of bread, or 10*s.* per pound, instead of 2*s.* for poor-rates, ought to consider himself essentially interested in promoting agricultural improvements; and ought, for his own interest, to support any measure calculated for that purpose, as far as his circumstances will admit of it.

II. It is well known, that there is scarcely any part of the kingdom, where greater quantities of waste and unproductive land are to be found, than in the neighbourhood of London, or ground, in many instances, more capable of improvement. It is to be hoped that the General Bill of Inclosure will soon pass, in consequence of which those wastes will be divided. But that will be of little avail, unless the means of improving them are ascertained. When Enfield



Chase was divided, many persons expected to make considerable profit, by purchasing and improving portions of that waste; but from ignorance how to go about it, the greater part of these undertakers suffered by the attempt. Whereas, had the principles of improvement been accurately ascertained, by means of experimental farms, no error of any great magnitude could have been committed, and the purchasers of Enfield Chase would have improved the land they had purchased, greatly to their own and to the public benefit.

III. There are numbers of persons in the city of London, and in other large and flourishing towns, who accumulate considerable fortunes by Commerce, by the Law, by the practice of Medicine, and other lucrative professions, whose ultimate object is, to retire into the country, and to reside on an estate purchased by the profits of their own industry and exertions. But after having purchased an estate, how can they manage it to advantage, or carry on the improvement of their property, without having previously acquired the knowledge necessary for that purpose? Many have attempted it, but have severely suffered by it. Whereas were there an experimental farm in their immediate neighbourhood, which, as subscribers, they had it in their power occasionally to visit, the books of which would always be open for their inspection, they would be enabled to acquire, in fact without expence, (for their subscriptions to the experimental farms will ultimately be repaid with compound interest) much knowledge and experience in the best modes of managing landed property, and of carrying on every species of improvement, of which they may avail themselves with peculiar advantage, when they are enabled, from the profits of successful industry, to purchase estates in the country.

Lastly. Many of the inhabitants of London are led, for the sake of recreation or health, occasionally to spend some time in the country: at present, many of them leave town without having any particular object when they make such excursions. But if accommodation were provided for those who wished to visit the experimental farm, and plots of ground allotted in its neighbourhood, where cottages or villas might be erected by the subscribers, what an advantage would it not be to the promoters of the proposed institution? In that case, when they went to the country, they would have an opportunity of directing their attention to the most important enquiries, and of collecting information on a subject, in which, in various respects, they must feel themselves deeply interested. Such an advantage ought certainly to be restricted to those who are subscribers to the proposed institution, and must appear to every intelligent person, a circumstance of the highest importance to any individual residing in the metropolis, in the adjoining villages, or in any considerable town in the kingdom.

Among the Subscribers who have already resolved to take a concern in this undertaking, are the following, viz.

J. J. Angerstein, Esq.	Earl of Egremont	Sir Charles Middleton
Duke of Argyle	John Grant, Esq.	Lord Rancliffe, M. P.
Col. Beaumont, M. P.	John Gray, Esq.	A. Shakespear, Esq. M. P.
Duke of Bedford	Robert Hunter, Esq.	J. H. Schneider, Esq.
Sir Francis Blake	Sir James Norcliff Innes.	Sir John Sinclair
Alexander Brodie, Esq.	Bishop of Llandaff	Duke of Somerset
Sir John Call, M. P.	Lord Mayor of London, M. P.	Samuel Thornton, Esq. M. P.
Richard Crawshay, Esq.	Edward Loveden Loveden, Esq.	Earl of Wemyss
Charles Cole, Esq.	Lord Macdonald, M. P.	John Wilkinson, Esq.
Sir James Colquhoun.	John Maitland, Esq.	&c. &c. &c.
Alexander Davison, Esq.	Sir J. Macpherson, M. P.	
William Devaynes, Esq. M. P.	M. Constable Maxwell, Esq.	

## EXPLANATION OF THE MANNER

## IN WHICH THE PROPOSED PLAN IS TO BE CARRIED INTO EXECUTION.

Though a capital of £.80,000 would be necessary, to carry the proposed measure into complete effect, yet from £.15,000 to £.20,000 will be sufficient to give the plan a fair beginning, either with an Experimental Farm, or an extensive Plantation, or with both, in the neighbourhood of the metropolis. It was never intended to let the measure drop, if the whole capital could not be raised at once; for however desirable it might be, to carry a great scheme into execution, because it commands the attention of those who take a concern in its management, and must necessarily produce more public good, yet the important object certainly is, to lay a solid foundation, which may afterwards be extended as circumstances will admit of it.

As soon as a proper farm can be established near the metropolis, accompanied with an extensive plantation, the profit of which must at least secure indemnification to the Subscribers, there will then be a model held forth, which every county in the kingdom may adopt that approves of such an idea; and it is, without doubt, much to be wished for, that several Experimental Farms and Plantations were established in various parts of the country, as branches of the same Institution; not only for the purpose of comparing the result of the same experiments, carried on by different people, and in a diversity of soils and climates (by which a spirit of emulation would be excited among the managers appointed to conduct them), but also as it would have the happy effect of directing, with greater force, the attention of the public to an Institution, which, instead of being confined to any particular district, extended its beneficial influence from one end of the island to the other. Unless, however, the money necessary for that purpose, is in a great measure advanced by the proprietors and farmers, where such Farms and Plantations ought to be situated, and the management of them inspected by committees of gentlemen residing in their immediate neighbourhood, who would undertake that trouble, and who were interested as Subscribers in the success of the undertaking; it would be in vain for any Institution formed in London, to endeavour to carry such a plan into execution, upon the extensive scale suggested in the original proposals.

As in various parts of the kingdom, however, particularly in the western and midland districts, in the counties of Durham and Northumberland, in Wales, and in Scotland, the establishment of Experimental Farms has long been a favourite object; there can be no doubt, that by exertion and perseverance, the measure of having a number of Experimental Farms, conducted under the auspices of the same Institution, will ultimately be accomplished.

## DESCRIPTION OF THE ANNEXED PLATES.

Plate I. is intended to give an idea of an experimental farm, arranged into four departments, and states the various particulars which may be cultivated in each. It is not to be expected, that a farm can be obtained, exactly calculated for carrying through such a plan completely, but the nearer it can approach to it the better. It is hardly necessary to add, that the Plate can only represent the arrangement for one year, and that the crops of every succeeding year, must vary, according to the rotations that are adopted, and the diversity of the seasons.

Plate II. contains plans and elevations of circular cottages to be entirely built of stone or brick; the expence of which, in the northern parts of Scotland, will not exceed £.30, though in the southern parts of Scotland and in England, they must necessarily be more expensive. Such cottages are peculiarly warm and convenient, and if built of good materials, will hardly ever require any repair, and indeed may last for ages.

Plate III. contains the plan of a village, with 20 circular cottages, schools for boys and girls, workshops for mechanics in the centre, a public room, and kitchen in the centre of the proposed building, a green or place for exercise, and a separate garden for each cottager.



## ANSWERS TO SOME OBJECTIONS

## WHICH HAVE BEEN URGED AGAINST THE PROPOSED INSTITUTION.

FIRST OBJECTION. *That no Experimental Farm at all is necessary.*

It is supposed by some, that no Experimental Farm is necessary, and that the principles of agricultural improvement will be brought to a sufficient degree of perfection without such an establishment. That grain may be raised, and cattle bred, without the aid of Experimental Farms, may be safely acknowledged, in the same manner as, in early ages of society, manufactures were carried on for domestic purposes, without the aid of much machinery; but no sooner had the population and commerce of a country increased than it became necessary to improve the art of manufacturing even the most common articles, by means of new inventions, and it is equally necessary to improve the art of agriculture, so as to produce more grain, and to feed more cattle on the same extent of ground, otherwise it will be impossible to furnish food to the increasing population of a country. Without Experimental Farms this cannot be effected.—Without such establishments it is impossible to ascertain what practices ought to be avoided, and what ought to be pursued. The former is as important to be known as the latter, yet they are seldom communicated to the public, because the farmer is in general ashamed of acknowledging his want of success, and indeed, where his experiments answer they are frequently concealed, lest others should avail themselves of such discoveries. The object of an Experimental Farm, however, is to ascertain facts, and to publish them, and as much credit would be acquired by an intelligent and public spirited society for their exertions in detecting errors, as in proving facts likely to be useful.

SECOND OBJECTION. *That there are many Experimental Farms, now carried on by individuals, which will answer the same purpose.*

It is said, in the second place, that there are many distinguished characters, who carry on experiments for their own amusement and information, by whose means every important fact will, in process of time, be ascertained. No man is more disposed to do justice to the merits of the respectable personages above alluded to than I am, nor can be more convinced, that their example is of infinite advantage to those who have the means of examining the progress they make. Their farms, however, are more properly to be accounted *pattern farms*, for the advantage of their own immediate neighbourhood, than experimental ones, in the strict sense of that word. In order to render indeed Experimental Farms generally useful, the farms must be open to the inspection of the public; the account of each experiment must be regularly published, and every experiment likely to effect the cultivation of any part of the kingdom, must be tried with the utmost precision. It cannot be expected, that persons of high rank, and whose attention is necessarily directed to other objects, can renounce every other pursuit, and devote themselves exclusively to the conducting of experiments. Whereas, when an Experimental Farm is once established, it will soon be proved by the evidence of facts; 1. What is the best mode of rendering arable land productive, and the proper rotation of crops to be adopted in all soils and situations: 2. What is the best system for the management of grass land: 3. What are the most useful implements of husbandry: 4. What are the most profitable breeds of animals, and the best and cheapest mode of rearing, of feeding, and of fattening them: 5. What is the best plan for rendering waste or barren land productive. These are points of infinite consequence, which never have yet, and indeed never can be ascertained, unless by means of farms appropriated for that special purpose. It will require, it is true, the unceasing attention of an intelligent manager, and the experiments, in order to be relied on, must be made with almost mathematical accuracy and strictness. The expence also must be considerable, but the ultimate advantage to the public must be so great as amply to compensate for any trouble or cost which may attend the execution.\*

THIRD OBJECTION. *That it would be difficult to find Managers.*

It is an obstacle to this measure, in the apprehension of some, that it will be scarcely possible to find managers qualified for the purpose. It certainly will be attended with some difficulty, but it would be libelling the agricultural skill and integrity of the country to suppose that such men could not be found. I know some myself, who would carry on the undertaking with zeal and energy, who would take some shares in the proposed undertaking, as a security for

\* For instance, if the question is,—what is the best breed of cattle? their food must be accurately weighed, and a regular account preserved of the whole quantity they eat during the course of the experiment. If the question is to ascertain whether large or small animals pay best for the food they eat, the experiment must be begun from their birth, and continued till they are slaughtered. In short, almost every experiment of great consequence requires a degree of attention and perseverance, and a duration in point of time which can only be expected from a public institution devoted exclusively to that purpose.

their good behaviour, and a pledge of their being interested in its success, and who, in every other respect, would, I am persuaded, be found perfectly adequate to the task. And here, I beg to remark, that it is hardly possible to suppose any person placed in a more desirable situation than the manager of such an Experimental Farm, if he felt a zeal in the cause, nor more likely to be detected, if he was either negligent of the duties he had to perform, or was guilty of dishonesty. He would lie under the necessity of making regular weekly reports of all his transactions: the books of the farm would be constantly liable to inspection, and the farm itself open to the examination of the subscribers, and perhaps, at stated times, of the public. A man placed in a situation so peculiarly ostensible, must be both honest and diligent. If he succeeds in his management, he has the credit of accomplishing one of the most important objects that any individual could undertake, and if he is detected in acts of negligence or dishonesty, his guilt could not be concealed,—it must necessarily become public, and he is ruined for ever. With such inducements to act well, and such serious grounds of apprehension if he should act otherwise, it is scarcely possible to suppose, that any human being of common understanding, could be deficient in his duty.

In regard to the particular plan of experiments to be pursued, the following measures may be adopted. As soon as a farm is taken, an accurate plan of it should be obtained, distinguishing the different soils, and every other circumstance connected with it. Every assistance will then be procured from the most skilful practical farmers in the kingdom, to draw up a regular course of experiments, and a rotation of crops best calculated for the different fields; and such a plan must be rigidly adhered to by the manager, unless the committee of management give directions to the contrary. Thus the manager will only be accountable for the strict execution of the orders he receives, and as those orders will be given, in consequence of the most mature consideration; hence the whole system, it is to be hoped, will be carried on with the utmost regularity and correctness. There would not then be a single principle in agriculture, that might not thus be ascertained in the space of a few years, and farmers in future, would have an invariable standard to go by, which they might rely on with certainty.

**FOURTH OBJECTION.** *That the profits of the proposed plantations are over-rated.*

It is evidently impossible to foresee, what will be the value of timber 30 years hence, as that must entirely depend on the quantity brought to market, on the demand, and on the state of credit and the quantity of money in circulation at the moment. As the price of every article, however, is progressively rising, is there not reason to imagine, that it will also be the case with timber? But even if that should not be the case, should timber sell only at its present value, the following circumstance will sufficiently prove, that the calculation of profit given in the original proposals, is greatly under-rated. The circumstance alluded to is this: in the neighbourhood of Edinburgh, there is a considerable wood amounting to above 300 acres, called the forest of Culross. It consists of Scotch firs, 43 years old. An exact survey has been taken of it, and an estimate of its value drawn up. It is stated in the advertisement, that there are 3500 cubical feet of measurable timber, the upset price of which is 6d. per foot; and 6000 running feet of pit-timber, at a farthing per foot. The value of both, per acre, would then be as follows:

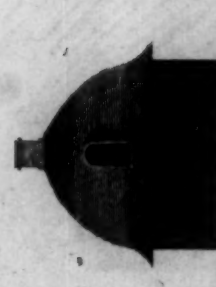
I. 3500 cubic feet at 6d. per foot	£. 87 10 0
II. 6000 running feet at ¼d. per foot	6 5 0
Total per acre	£. 93 15 0

It is well known, that the value of larch at 30 years growth, is equal to that of fir at 45 years. There is reason therefore to hope, that the 5000 acres of land, proposed to be planted with larch, would be worth £. 90 per acre, which for 5000 acres would amount to £. 450,000, instead of £. 218,000, at which the sale of the timber, the ground, &c. was originally estimated. What the timber in Culross forest will really sell for, is not yet known, but there is every reason to believe, that the price must be higher than 6d. per foot, and that the calculation of profit from the proposed plantations, originally stated at £. 218,000, will be found greatly under-rated.

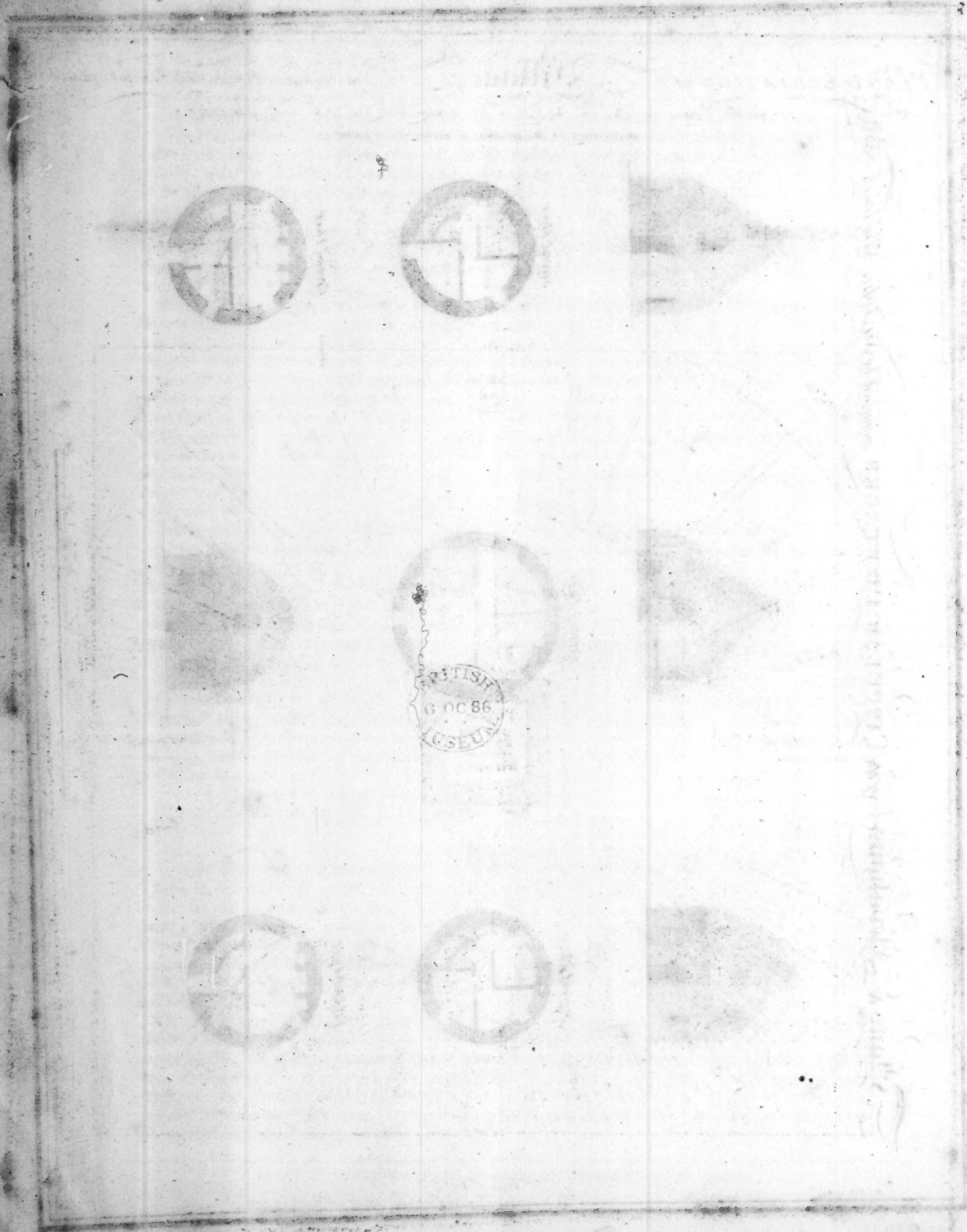
On the whole I hope it will appear, that though there is no plan of so extensive and complicated a nature, to which ingenious men may not discover objections, yet that none can be urged against the present proposal which may not be satisfactorily answered; and that even if some difficulties should remain, they ought not to stand in the way of carrying a measure into effect, of such infinite public importance, which would lay the foundation, of rendering this country superior to every other, for agricultural skill, and consequently the most likely to reach the summit of power and opulence.



Plans & Specifications of the CIRCULAR COTTAGES suggested by Sir John Sinclair Bart



Soul of Feet



*Vertical text on the right side, possibly a library or collection label.*



*PLAN & ELEVATION of a Village* *consisting of 20 HOUSES to be placed*  
*in the Center of A FIELD containing 520.15, or, 20 English Acres,*  
*according to the quality & nature of the Soil.*

